

ABSTRACT OF THE DISCLOSURE

A database store method and system is provided for a virtual persistent heap. An Application Programming Interface (API) provides a mechanism to cache portions of the virtual heap into the in memory heap for use by the application. The virtual heap may be stored in a persistent store. Thus, the database store method and API are provided to manage the virtual persistent heap in the store. The persistent store may be composed of one or more virtual persistent heaps, with one virtual persistent heap for each application running in the virtual machine. Each virtual persistent heap may be subdivided into cache lines. A cache line is the smallest amount of data that can be read or written in the heap. The database store API is a small footprint set of calls to match the memory constraints of a targeted virtual machine. The database store method and API may work with small consumer and embedded devices, as well as with larger devices supporting Java and other virtual machine environments such as PCs, laptops, etc. The store API may provide atomicity on the store transaction to substantially guarantee the consistency of the information stored in the database. The database store API provides several calls to manage the virtual persistent heap in the store. The calls may include, but are not limited to: opening the store, closing the store, atomic read transaction, atomic write transaction, and atomic delete transaction.

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